

CLAIMS

Claims 1-27 (CANCELED)

28. (Previously Presented) An electroacoustic transducer comprising

- a magnetic circuit of a magnetically conductive material with a pair of opposed surfaces defining a gap therebetween, the magnetic circuit comprising a magnet inducing a magnetic field in the gap, the magnet having a surface constituting one of the opposed surfaces,
- a substantially plane diaphragm, and
- a coil having electrically conducting paths secured to the substantially plane diaphragm, the coil having portions of its paths situated in the gap,

wherein the magnetically conductive material defines magnetic return paths between the pair of opposed surfaces, said magnetic return paths extending in a plane being substantially parallel to the substantially plane diaphragm.

29. (Previously Presented) A transducer according to claim 28, wherein the magnetic circuit has two pairs of opposed surfaces defining first and second gaps, and wherein the coil has first and second gap portions of its paths situated in respective ones of the first and second gaps, and bridging portions of paths interconnecting the first and second gap portions of paths, the coil being secured to the substantially plane diaphragm at the bridging portions.

30. (Previously Presented) A transducer according to claim 29, wherein each pair of opposed surfaces are substantially plane surfaces being substantially parallel to each other.

31. (Previously Presented) A transducer according to claim 29, wherein the magnetic circuit comprises a body of magnetically soft material with two openings therein.

32. (Previously Presented) A transducer according to claim 31, wherein magnets are positioned in the openings, and wherein the magnets are attached to outer legs of the body of magnetically soft material so as to form gaps between surfaces of an inner leg of the body of magnetically soft material and surfaces of the magnets.

33. (Previously Presented) A transducer according to claim 31, wherein magnets are positioned in the openings, and wherein the magnets are attached to an inner leg of the body of magnetically soft material so as to form gaps between surfaces of outer legs of the body of magnetically soft material and surfaces of the magnets.

34. (Previously Presented) A transducer according to claim 31, wherein the openings in the magnetic circuit are through-going.

35. (Previously Presented) A transducer according to claim 29 wherein the bridging portions define a bridging plane having a substantially flat surface for securing the coil to the substantially plane diaphragm, and wherein each of the gap portions comprises a plurality of electrically conducting segments being substantially parallel to the bridging plane.

36. (Previously Presented) A transducer according to claim 35, wherein the electrically conducting segments in the gap portions are substantially linear.
37. (Previously Presented) A transducer according to claim 28, wherein the coil is formed by a wounded electrically conducting wire.
38. (Currently Amended) A transducer according to claim 28, wherein the coil is formed by electrically conducting paths formed on a flexible circuit board, ~~such as a flex print.~~
39. (Previously Presented) A transducer according to claim 28, further comprising a casing for housing the magnetic circuit, the casing comprising a rectangular-shaped opening being defined by two pairs of edges, the substantially plane diaphragm being attached to the casing in a manner so as to at least partly cover the rectangular-shaped opening.
40. (Previously Presented) A transducer according to claim 39, wherein the substantially plane diaphragm has a rectangular shape so as to cover the rectangular-shaped opening of the casing.
41. (Previously Presented) A transducer according to claim 39, wherein the substantially plane diaphragm is attached to one of the two pairs of edges of the casing.
42. (Previously Presented) A transducer according to claim 39, wherein the substantially plane diaphragm is attached to both pairs of edges of the casing.
43. (Previously Presented) An electroacoustic transducer comprising
- a magnetic circuit comprising a magnet inducing a magnetic field in a gap,

- a substantially plane diaphragm comprising electrically conductive portions, and
- a coil secured to the substantially plane diaphragm, the coil comprising electrically conducting path ends electrically connected to the electrically conductive portions of the substantially plane diaphragm, the electrically conductive portions further having externally accessible portions for electrically terminating the transducer.

44. (Previously Presented) A transducer according to claim 43, wherein the coil comprises bridging portions defining a bridging plane having a substantially flat surface for securing the coil to the diaphragm, and a gap portion outside the bridging plane, the gap portion comprising a plurality of electrically conducting segments being substantially parallel to the bridging plane.

45. (Previously Presented) A transducer according to claim 44, wherein the electrically conducting segments in the gap portion are substantially linear.

46. (Previously Presented) A transducer according to claim 43, wherein the coil is formed by a wound electrically conducting wire.

47. (Currently Amended) A transducer according to claim 43, wherein the coil is formed by electrically conducting paths formed on a flexible circuit board, ~~such as a flex print.~~

48. (Previously Presented) A transducer according to claim 43, wherein a pair of opposed surfaces of a magnetically conductive material define the gap, and wherein the magnet has a surface constituting one of the opposed surfaces, and wherein magnetic return paths in the

magnetically conductive material define a plane being substantially parallel to a plane defined by the substantially plane diaphragm.

49. (Previously Presented) A transducer according to claim 43, wherein the magnetic circuit has two pairs of opposed surfaces defining first and second gaps, and wherein the coil has first and second gap portions of its paths situated in respective ones of the first and second gaps, and bridging portions of paths interconnecting the first and second gap portions of paths, the coil being secured to the diaphragm at the bridging portions.

50. (Previously Presented) A transducer according to claim 49, wherein each pair of opposed surfaces are substantially plane surfaces being substantially parallel to each other.

51. (Previously Presented) A transducer according to claim 49, wherein the magnetic circuit comprises a body of magnetically soft material with two openings therein.

52. (Previously Presented) A transducer according to claim 51, wherein each magnet is attached to the magnetically soft material so as to form gaps between surfaces of an inner leg of the body of magnetically soft material and surfaces of the magnets.

53. (Previously Presented) A transducer according to claim 51, wherein each magnet is attached to the magnetically soft material so as to form gaps between surfaces of outer legs of the body of magnetically soft material and surfaces of the magnets.

54. (Previously Presented) A transducer according to claim 51, wherein the openings in the magnetic circuit are through-going openings.

55. (Previously Presented) A transducer according to claim 43, further comprising a casing for housing the magnetic circuit, the casing comprising a rectangular-shaped opening being defined by two pairs of edges, the substantially plane diaphragm being attached to the casing in a manner so as to at least partly cover the rectangular-shaped opening.

56. (Previously Presented) A transducer according to claim 55, wherein the substantially plane diaphragm has a rectangular shape so as to cover the rectangular-shaped opening of the casing.

57. (Previously Presented) A transducer according to claim 55, wherein the substantially plane diaphragm is attached to one of the two pairs of edges of the casing.

58. (Previously Presented) A transducer according to claim 55, wherein the substantially plane diaphragm is attached to both pairs of edges of the casing.